### THE WATER SPOT 2000

## BITS OF INFORMATION FROM THE HAWAI'I SAFE DRINKING WATER BRANCH

Volume 4, Issue 3 April/May 2000 Phone: (808) 586-4258

#### REVISED CLASS V UIC REGULATIONS TO BAN MOTOR VEHICLE WASTE DISPOSAL WELLS AND LARGE CAPACITY CESSPOOLS

Hawaii adopted State UIC regulations in 1984 pursuant to the federal UIC regulations under the Safe Drinking Water Act, to address risks to groundwater from a variety of deep and shallow injection wells. The original federal UIC regulations were very broad, due to the diversity of wells, especially shallow injection wells (Class V wells). The Class V category of wells includes injection wells used to dispose of sewage effluent, industrial wastewater, aquaculture-related water, surface drainage, and other types of wastewater not covered under the more general categories of injection wells.

On December 7, 1999, the United States Environmental Protection Agency (USEPA) published revisions to the federal Underground Injection Control (UIC) regulations specifically adressing Class V wells. These revisions ostensibly added new restrictions to two subcategories of Class V wells: motor vehicle waste disposal wells and large-capacity cesspools. Hawaii must now promulgate state regulations to meet federal requirements.

Class V injection wells have the potential to contaminate drinking water sources because of contaminants infiltrating through soil and rock and then entering underlying groundwater. Motor vehicle waste disposal wells may contain fluids drained from automobiles during maintenance. These fluids may contain substances known to contaminate underground sources of drinking water including fuel and fuel oxygenates (MTBE), anti-freeze (ethylene glycol), and metals. Contaminants may also be introduced during maintenance, such as degreasers (PCE, TCE, etc.) These substances may contaminate groundwater through shallow disposal wells, as well as through septic systems using infiltration galleries.

Cesspools, which are a type of injection wells are commonly constructed as a cylindrical pit reinforced with brick, stone or concrete that allows untreated sewage to percolate directly into the soil and groundwater. Large-capacity cesspools (serving 20 or more persons per day) are being federally banned and phased out because they can be a significant source of microbial contaminants and nitrates. In Hawaii, the Department of Health has been implementing the elimination of large and single family cesspools by requiring the use of septic systems for the treatment of sanitary wastewater.

#### **HIGHLIGHTS:**

#### Large-capacity Cesspools (serving 20 or more people)

- < New cesspools are prohibited in Hawaii and nationwide as of April 2000.
- < Existing cesspools will be phased out nationwide by April 2005.

#### Motor Vehicle Waste Disposal Wells (fluids from vehicular repair/maintenance)

- < New wells are prohibited nationwide as of April 2000.
- Existing wells in "regulated areas" will be phased out, but owners/operators may seek a waiver and obtain a UIC permit to operate. Stringent permit requirements will be imposed.

#### Key definitions related to large-capacity cesspools and motor vehicle waste disposal wells

- "Regulated areas" are groundwater protection areas identified under the State Source Water Assessment Program, a program mandated by the federal Safe Drinking Water Act Amendments of 1996.
- "Other sensitive groundwater areas" (OSGWA) must be identified under the Class V regulations. OSGWA represent land areas that have not been identified as "regulated areas" but have groundwater protection needs nonetheless.

**Note:** The UIC line and its watershed areas mauka of the line serendipitously fulfills this requirement and further brings awareness to EPA headquarters and Region 9 that Hawaii's unique and long-standing approach to groundwater and watershed protection has merit that can be applied nationwide.

Federal Register Notice 99-31048 contains the new regulations and clarifications of existing EPA UIC Program requirements. They will be published next in the Code of Federal Regulations in 40 CFR, parts 144-147. Class V regulations are consolidated in 40 CFR part 144, subpart G.

## A SUMMARY OF THE CHANGES TO THE UNDERGROUND INJECTION CONTROL REGULATIONS (40 CFR parts 144-146) as of December 7, 1999 are as follows:

- 144.3 Changes to the definitions and new definitions: cesspool, drywell,, improved sinkhole, point of injection, sanitary waste, septic system, subsurface fluid distribution system, well and well injection.
- **144.79** General
- **144.80** What is a Class V injection well?
- **144.81** 16 examples of types of Class V wells.
- **144.82** Reiteration of prohibition of fluid movement, regulatory tools to ensure protection, including steps for closure of wells that endanger ground water.
- **144.83** Reiteration of inventory requirements, and specific additional inventory information from specialized wells; (b) examples of information which may be requested from a specific well owner.
- 144.84 Criteria for authorization by rule to operate a Class V injection well, permits and closure.
- 144.85 New restrictions on large capacity cesspools and motor vehicle waste disposal wells.
- **144.86** Information for well owners regarding Source Water Assessments.
- **144.87** Effective dates and timing with delineations of groundwater protection areas (by Source Water Programs) and other sensitive groundwater areas (delineated by UIC Programs) and criteria/schedule for rule effectiveness statewide.
- 144.88 Tables which summarize restrictions/requirements for large capacity cesspools and motor vehicle waste disposal wells.
- 144.89 Summary of steps required for closure or conversion of injection wells.
- 145.23 Requirement that delegated state programs and EPA Regional Direct Implementation programs identify a method and schedule for delineating other sensitive groundwater areas, i.e., those areas containing underground sources of drinking water which might not be otherwise delineated through the Source Water Program.
- **146.3** New definitions reiterated.
- **146.10** Plugging and abandonment for all injection wells.

#### SIGNIFICANT POINTS TO REMEMBER IN ATTAINING CONFORMANCE WITH THE NEW REGULATIONS

The following items are most significant points to remember to attain conformance to the new regulations by due dates for both the state and affected facilities. Timely conformance will prevent facilities from incurring federal violations and prevent EPA from imposing statewide restrictions that may not have tangible benefit to Hawaii while imposing unnecessary system-improvement costs across-the-board on affected facilities. For example, if timely conformance is not achieved, a statewide requirement becomes effective for all facility owners/operators of motor vehicle waste disposal wells, regardless of facility location, to either properly abandon their wells or obtain a federal UIC permit to operate.

- The construction (granting approval) of new large-capacity cesspools is prohibited as of April 5, 2000.
- Existing large-capacity cesspools must be phased out within 5 years after April 5, 2000, i.e, April 5, 2005. Solutions include proper cesspool abandonment, connection to a municipal sewer, or upgrading to an on-site wastewater treatment system.
- The state must complete source water assessments and delineate OSGWA by January 1, 2004. No federal money is available for states to delineate OSGWA.
- < Owners/operators (O/O) of motor vehicle waste disposal wells (MVWDW) have one year after source water assessments have been made to close their wells or obtain a UIC permit to operate their wells.
- If the State does not complete source water assessments by January 1, 2004, the federal rule applies statewide, and O/O of MVWDW have one year to close their wells or obtain a UIC permit to operate their wells.
- < O/O of MVWDW in an OSGWA have until January 1, 2007 to close their wells or obtain a UIC permit to operate their wells.
- If the state does not delineate OSGWA, the O/O of MVWDW statewide must close their wells or obtain a UIC permit to operate their wells by January 1, 2007.
- One-year time extensions may be granted by EPA to a state in order to complete source water assessments and the identification of OSGWA. The one-year time extension would also consequently apply to O/O that are affected by the assessments and OSGWA.

- States and EPA must devise ways to effectively inform the regulated community. Possible ways to disseminate information are through the Source Water Assessment Program (SWAP), consumer confidence reports, trade organizations, building inspectors, local watershed associations, and existing UIC facility inventories.
- < Although Hawaii is not currently a UIC primacy state, Class V primacy revision elements must be factored into Hawaii's current effort to assemble a primacy application package for EPA approval. Mandatory elements include a Program Description, applicable, state statutes and regulations, state Attorney General's statement of enforceability, memorandum of agreement between the State and EPA, Region IX, and a sensitive groundwater area plan.</p>

#### MEETING THE REQUIREMENTS OF THE NEW CLASS V INJECTION WELL REGULATIONS

In order to meet the intent of this new regulation, the Safe Drinking Water Branch will be conducting the following:

- < Obtain EPA outreach materials that explain the Class V requirements and depict performance time frames.
- Prepare a mail-out to injection well facilities affected by the Class V regulations. The mail-out should clearly explain facility responsibilities and obligations.
- Implement different ways to broadcast the Class V requirements. Potential ways include "The Water Spot 2000" newsletter, Safe Drinking Water Branch webpage, informational inserts in UIC correspondence, and public notices.
- < Prepare to justify the use of Hawaii's UIC line and watershed areas as OSGWA.
- < Incorporate the federal Class V requirements into Hawaii's current Chapter 23, UIC amendments.

#### FOR MORE INFORMATION REGARDING THE NEW CLASS V INJECTION WELL REGULATIONS:

See the following websites: <a href="http://www.epa.gov/safewater/uic">http://www.epa.gov/safewater/uic</a> (for the national press release and fact sheet)

http://www.access.gpo.gov/su\_docs/fedreg/a991207c.html - scroll to Environmental Protection Agency (to view the Federal Register of December 7, 1999, vol. 64, no. 234,

page 68546)

or contact: EPA, Region 9 - Underground Injection Control Program @ (415) 744-1834.

#### AWWA HAWAII SECTION --- ANNUAL CONFERENCE

The Hawaii Section of the American Water Works Association (AWWA) announces its annual conference, scheduled for May 16-19, 2000 at the Renaissance Illikai Waikiki, with a theme of "Water Profession Challenges For A New Millennium". The conference will offer numerous workshops and presentations -- all with an aim toward preserving the quality of Hawaii's water.

Pre-conference workshops will be offered on May 16 from 9 a.m. to 3 p.m. The topics will be "Development of a Public Participation Process for the Oahu Integrated Resource Planning Project", presented by Felix Limtiaco of The Limtiaco Consulting Group and by Ron Linsky of the National Water Research Institute; and "Source Water Assessment Protection", presented by Rachel Herpel of Groundwater Foundation and Steve Spengler of URS Greiner Woodward Clyde.

Popular elements of the conference will be the annual "Ono Water Contest" which will pit the private resort water producers against each other in a "water taste-off". Once again, by popular demand the emcee for the contest will be Rodney Villanueva. Another highlight of the conference will be the annual "Pipe Tapping Contest", which pits teams of workers against each other as they attempt to drill into large water pipes under full pressure without causing any leakage. The teams are judged on speed, technique and containment.

The technical portion of the conference will include presentations on Water System Planning and Solutions, Regulatory Issues, Personal Development, and new technologies in the Technology Corners I and II.

For more information about the conference, contact Mike Miyahira, Akinaka & Associates at (808) 536-7721.

## THIS WILL BE THE FINAL ANNOUNCEMENT REGARDING THE DRINKING WATER DISTRIBUTION SYSTEM OPERATORS TRAINING COURSES



## BASIC DRINKING WATER DISTRIBUTION SYSTEM OPERATOR TRAINING COURSE

#### **FIVE-DAY TRAINING COURSE**

\* No Fee To Attend Course - Exam Fee is \$20.00 \*

WHERE: LOCATIONS ON KAUAI, OAHU, MOLOKAI, MAUI, AND HAWAII

WHEN: FEBRUARY THROUGH DECEMBER 2000

See the schedule below for the locations, dates, and times

PRESENTED BY: RURAL COMMUNITY ASSISTANCE CORPORATION

SPONSORS: THE STATE OF HAWAII DEPARTMENT OF HEALTH, SAFE DRINKING WATER

BRANCH AND THE HAWAII SECTION AWWA, WITH FUNDING FROM THE U.S.

ENVIRONMENTAL PROTECTION AGENCY

In the near future, the Safe Drinking Water Act will require all community and nontransient noncommunity water systems to have certified distribution system operators. To maintain their compliance status, public water systems are strongly encouraged to send their operation and maintenance personnel who perform work which could affect the quality of the drinking water (or supervise such work) to one of the basic training courses for water distribution system operators. This course will cover material designed to help existing public water system distribution system operators prepare to take the operator certification examination which will be administered on the last day.

#### COURSE TOPICS WILL INCLUDE:

- ! OPERATOR RESPONSIBILITIES/WATER SOURCES/INFRASTRUCTURE
- ! DISTRIBUTION SYSTEM FACILITIES/PREVENTIVE MAINTENANCE
- ! WELLS, PUMPS, AND MOTORS/FLOW AND PRESSURE REGULATION
- ! WATER QUALITY/SAFE DRINKING WATER ACT/CAPACITY DEVELOPMENT
- ! WATER TREATMENT/DISINFECTION/CORROSION CONTROL
- ! LEAK DETECTION AND REPAIR/CROSS-CONNECTION/BACKFLOW PREVENTION
- ! SAFETY/OSHA REGULATIONS/CONSUMER RELATIONS
- ! SOLVING MATH PROBLEMS/ENGINEERING CONCEPTS REVIEW
- ! OPERATOR CERTIFICATION EXAM PREPARATION TIPS

The workshop is sponsored by the Safe Drinking Water Branch with no charge for tuition or the course manuals. The U. S. EPA provided the funds for the operator training course. The training manuals were developed by Ken Kerri at California State University, Sacramento.

Rural Community Assistance Corporation will conduct the training and is not involved with the certification examinations. The AWWA, Hawaii Section, will obtain the distribution system operator certification examinations from the Association of Boards of Certification (ABC). The ABC will charge \$20.00 per examination, which includes the preparation and correction of the exams by ABC. Mr. Larry Whang of the SDWB, assisted by the SDWB staff, will administer the examinations.

Please complete and mail the examination registration form with the \$20.00 examination fee to Mr. Larry Whang at the SDWB. The mailing address is:

#### Safe Drinking Water Branch, 919 Ala Moana Boulevard, Rm 308, Honolulu, HI 96814.

The examination fee must be paid by a postal money order or a bank-issued cashier's check payable to "AWWA, HAWAII SECTION". CASH OR PERSONAL CHECKS WILL NOT BE ACCEPTED.

Registering for the operator certification examination will enroll one in the course. However, space is **LIMITED** and some sites may be filled, we request that you contact the SDWB prior to submitting your registration to ensure that the selected course is available. **The deadline for registering is May 31, 2000.** 

The ABC requires that operators pre-register for the certification examination. Therefore, operators who fail to pre-register will not be allowed to take the certification examination. Operators taking the training course must complete the training in its entirety to be eligible to take the operator certification examination at course end.

If any questions arise pertaining to the certification examination/registration, please contact Mr. Larry Whang at (808) 586-4258.

For questions about the training course, contact Mr. Glenn Johansen of RCAC at (808) 961-6213.

#### The training course offerings are scheduled as follows:

Pearl City, Oahu -	May 2, 3, 4, 8, and 9, 2000 (7:45 a.m. to 3:45 p.m. daily) at Department of Health Laboratory
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Building.

Hilo, Hawaii - May 23, 24, 25, 30 and 31, 2000 (7:45 a.m. to 3:45 p.m. daily), at Department of Health -

Environmental Health Building.

**Kona, Hawaii** - June 19, 20, 21, 27, and 28, 2000 (8:00 a.m. to 4:00 p.m. daily) at Natural Energy Laboratory

Hawaii Authority Facility.

**Wailuku, Maui** - August 1, 2, 3, 8 and 9, 2000 (7:45 a.m. to 3:45 p.m. daily), at State Building

Conference Room.

**Lihue, Kauai** - August 22, 23, 24, 29 and 30, 2000 (7:30 a.m. to 3:30 p.m. daily), at Kauai War Memorial

Convention Hall.

Pearl City, Oahu - September 5, 6, 7, 12 and 13, 2000 (7:45 a.m. to 3:45 p.m. daily) at Department of Health

Laboratory Building.

Kaunakakai, Molokai - September 26, 27, 28, October 3 and 4, 2000 (7:30 a.m. to 3:30 p.m. daily), at Department of

Hawaiian Home Lands Conference Room.

**Wailuku, Maui** - October 10, 11, 12, 17 and 18, 2000 (7:45 a.m. to 3:45 p.m. daily), at State Building

Conference Room.

Pearl City, Oahu - October 31, November 1, 2, 8 and 9, 2000 (7:45 a.m. to 3:45 p.m. daily) at Department of Health

Laboratory Building.

Pearl City, Oahu - December 11, 12, 13, 19 and 20, 2000 (7:45 a.m. to 3:45 p.m. daily) at Department of Health

Laboratory Building.

Note: This course schedule may be subject to change. Registrants will be notified of changes.

#### BOARD OF CERTIFICATION OF OPERATORS IN PUBLIC WATER SYSTEM STATE OF HAWAII

# Distribution System Operators Examination Registration Form In Conjunction with Capacity Development Program Basic Operator Training Classes

Phone: (808) 586-4258

Fax: (808) 586-4370

EXAM FEE: \$20.00 postal money order or bank-issued cashier's check payable to the **AWWA, HAWAII SECTION**.

Please submit the exam fee and the completed application form to:

For:

Board of Certification of Operators in Public Water Systems Hawaii Department of Health Environmental Management Division Safe Drinking Water Branch 919 Ala Moana Boulevard, Room 308 Honolulu, Hawaii 96814-4920

## REGISTRATION FOR RETROACTIVE CERTIFICATION EXAM (Please type or print information)

(First)	(Middle Initial)	
	Zip Code	
Business Phone No.	Social Security No.	
	Operator Grade Level	
	PWS I.D. No.	
F CLASS		
	Business Phone No.	

## THE GROUNDWATER FOUNDATION, IN CONJUNCTION WITH THE HAWAII STATE DEPARTMENT OF HEALTH TO CONDUCT FOUR DRINKING WATER SOURCE ASSESSMENT AND PROTECTION INFORMATION SESSIONS

Drinking Water Source Assessments will help the public understand where their drinking water supply comes from and how vulnerable their drinking water source may be to potential sources of contamination. With this understanding, citizens will be more likely to get motivated and involved in the protection of their drinking water supply.

To facilitate the public's understanding, The Groundwater Foundation will offer "An Introduction to Drinking Water Source Assessment and Protection," a workshop designed to help individuals learn more about drinking water assessment and protection. Workshop attendees will learn about:

- (1) Requirements for drinking water source assessment and protection stated in the 1996 Safe Drinking Water Act Amendments;
- (2) How states have developed plans for drinking water assessments and what to look for in those plans; and
- (3) How to get involved in the drinking water source assessment and protection process on the local level.

#### **MAY 11, 2000**

On Thursday, May 11, 2000 from 1:00 p.m. to 3:30 p.m., the first Drinking Water Source Assessment and Protection Session will be held via videoconferencing at the following State Videoconference Center Locations:

Kalanimoku Videoconference Center - Honolulu Hilo Videoconference Center Kalanimoku Building Hilo State Office Builing 1151 Punchbowl Street, Room B10 75 Aupuni Street, Basement

Wailuku Videoconference Center
Wailuku Judiciary Building
Lihue State Office Building
2145 Main Street, First Floor
Lihue State Office Building
3060 Eiwa Street, Basement

#### **MAY 13, 2000**

On Saturday, May 13, 2000 from 10:00 a.m. to 12:00 noon, the second Drinking Water Source Assessment and Protection Session will be held at the University of Hawaii at Manoa, Campus Center, 2465 Campus Road, Honolulu, Hawaii. This session is co-hosted by the Hawaii State Department of Health and the University of Hawaii Water Resource Research Center.

#### MAY 15, 2000

On Monday, May 15, 2000 from 12:00 noon to 3:00 p.m., the third Drinking Water Source Assessment and Protection Session will be held in Maui County at the Cameron Center Auditorium, 95 Mahalani Street, Wailuku, Hawaii. This session is co-hosted by the Maui County Water Board, Hawaii State Department of Health and the U.S. EPA, Region IX.

For more information regarding these three sessions or to let us know if you plan to attend, please contact:

Rachael Herpel Phone: 402-434-2740 or 1-800-858-4844

The Groundwater Foundation FAX: 402-434-2742

E-mail: <a href="mailto:rachael@groundwater.org">rachael@groundwater.org</a> Web Site: www.groundwater.org

Please R.S.V.P. for the three abovementioned sessions by May 5, 2000. There is no cost to attend. This event is supported by grant funds from the United States Environmental Protection Agency, Region IX.

#### MAY 16, 2000

On Tuesday, May 16, 2000 from 9:00 a.m. to 3:00 p.m., the fouth Drinking Water Source Assessment and Protection Session will be held as a pre-conference workshop to the Hawaii AWWA Conference at the Renaissance Illikai Waikiki. For more information regarding the pre-conference workshop or to register for the workshop, please contact: Mike Miyahira, Akinaka & Associates at (808) 536-7721.

#### AMERICAN BACKFLOW PREVENTTION ASSOCIATION - HAWAII CHAPTER CONFERENCE

The American Backflow Prevention Association (ABPA) – Hawaii Chapter held a two-day conference at Ala Moana Hotel on March 28 and 29, 2000. The conference began with a welcoming address and introduction by Chapter President Leon Hamili, and Conference Chairperson George Lloyd. Speakers invited from the mainland discussed a cross-connection control program (CCC). Ray Ann Brammer, Attorney at Law from Sterling, Colorado, discussed the legal liability for water purveyors, engineers, testers, plumbing and fire line contractors dealing with CCC. Also, back from the University of Southern California, home of the FCCCHR, was Henry Chang, reviewing the USC FCCCHR approval process for backflow prevention devices and updating the 10th edition USC Cross Connection Manual. Henry also did a live demonstration by closed-circuit TV on repair and troubleshooting backflow prevention devices. Rounding out the mainland guests was BAVCO representative Jim Purzycki, conducting a class called "Backflow Prevention 101" and everything else dealing with a backflow prevention program. Jim is the "guru" on cross connections and backflow prevention devices.

We certainly can't forget the local group that worked hard to make this a successful conference. Representing the different water systems and discussing their backflow prevention programs were Scott Muraoka, Honolulu Board of Water Supply; Wayne Hinazumi, Kauai Department of Water; Mike Watanabe, Hawaii Water Department; Jay Nakashima Maui Water Department; and Greg Hayashi from the Navy Public Works Center. Mike Cunningham discussed the proper installation of backflow prevention devices, and ABPA – Hawaii Chapter's Vice-President Clyde Minimishin discussed Plumbing and Mechanical Contractors Association (PAMCA) training facility on the tester certification program. Bill Wong and Jacob Hee discussed past cross-connection incidents and their ramifications. Finally the exhibitors displaying their products were just terrific.

EPA suggested that a cross-connection control program be a primacy requirement in a State Drinking Water Program in the initial draft of June 1998 Ground Water Rule. However, EPA has now deferred any possible new CCC requirements to the development of the LT2ESWTR, scheduled for publication in May 2001. The SDWB will keep you informed on new requirements for a cross-connection control program.

The Safe Drinking Water Branch wants to thank the ABPA – Hawaii Chapter and George Lloyd for organizing the cross-connection and backflow prevention technical conference. The SDWB recommends that all water systems without an existing cross connection and backflow prevention program begin the process of implementing such a program. All it takes is one incident of non-potable water entering your drinking water system – and you will have many problems associated with a contaminated water system. For example: additional microbiological and chemical sampling, possible illness and death, public notification, etc. If you need any information on cross-connection control and backflow prevention, please do not hesitate to contact the Safe Drinking Water Branch.

If you missed this 3rd ABPA Technical Conference, the SDWB strongly recommend you or a representative from your water system plan to attend the next conference.

#### NOW YOU CAN RECEIVE "THE WATER SPOT 2000" ELECTRONICALLY

#### In the next issue of "The Water Spot 2000"

- The Unregulated Contaminant Monitoring Rule (UCMR)
- An Update on the Groundwater Rule
- An Interview with Barry Pollock, EPA's Hawaii PWSS Project Officer (if I can catch up with him during his stay here in May!! if not, you can catch him at the AWWA Hawaii Section Conference on May 17-18, 2000)

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HONOLULU:	586-4258	586-4370		
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MAUI:	984-8234	984-8222	984-2400, ext. 64258	
WEST HAWAII:	322-7011	324-0028	974-4000, ext. 64258	
EAST HAWAII:	933-0401	933-0400	974-4000, ext. 64258	
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The Water Spot is published by the Safe Drinking Water Branch, Environmental Management Division of the Hawai'i State Department of Health and is distributed to water purveyors, water system operators, staff, consultants, and other interested parties.

The Water Spot may also be viewed on the Safe Drinking Water Branch's web site at: http://www.hawaii.gov/health/eh/sdwb

Please send your THE WATER SPOT 2000

suggestions, ideas, questions or comments to:

Safe Drinking Water Branch State Department of Health 919 Ala Moana Blvd., Room 308

Honolulu, Hawaii 96814

OR Fax us at (808) 586-4370, Attn: "THE WATER SPOT 2000"

SDWB WEB SITE:

http://www.hawaii.gov/health/eh/sdwb

HISWAP WEB SITE:

http://www.aloha.net/~will/hiswap.html

**DEPT. OF HEALTH WEB SITE:** 

http:??www.hawaii.gov/health



BENJAMIN J. CAYETANO Governor of Hawaii BRUCE S. ANDERSON, Ph.D., M.PH Director of Health GARY GILL
Deputy Director for
Environmental Health

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